REVIEW OF NEW OR MODIFIED AIR EMISSION SOURCES

Purpose

This Air Quality Group procedure describes the review of all new and modified projects to determine whether they have regulatory requirements under the Clean Air Act or DOE Orders 5400.1 and 5400.5.

Scope

This procedure governs the activities of all Air Quality personnel involved in determining and documenting the regulatory requirements for new or altered emission or direct penetrating radiation sources under the Clean Air Act or DOE Orders.

In this procedure

This procedure addresses the following major topics:

Hazard Control Plan

The hazard evaluation associated with this work is documented in HCP-ESH-17-Office Work.

Signatures

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Approved by: _____ Terry Morgan, QA Officer	Date: 3/14/02
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02/09/04

General information about this procedure

Attachments

This procedure has the following attachments:

Number	Attachment Title	No. of pages
1	Flow Chart of NSR Process	1

History of revision

This table lists the revision history and effective dates of this procedure.

Revision	Date	Description Of Changes
0	12/5/00	New document.
1	3/18/02	Added steps for involvement of DPRNET project leader to review for compliance with DOE Orders 5400.1 and 5400.5.

Who requires training to this procedure?

The following personnel require training before implementing this procedure:

- Air Quality Review Project Leader
- DPRNET Project Leader
- ESH-17 personnel assigned to perform this procedure.

Training method

The training method will be "**self-study**" (**reading**) and will be documented in accordance with the procedure for training (ESH-17-024).

Definitions specific to this procedure

Modification: defined in 20 NMAC 2.72 as any physical change in, or change in the method of operation of, a stationary source which results in an increase in the potential emission rate of any regulated air contaminant emitted by the source or which results in the emission of any regulated air contaminant not previously emitted, but does not include:

1. a change in ownership of the source;
2. routine maintenance, repair, or replacement;
3. installation of air pollution control equipment….; or
4. unless previously limited by enforceable permit conditions:
    a. an increase in production rate…;
    b. an increase in the hours of operation; or
    c. use of an alternative raw material…..

General information, continued

References

The following documents are referenced in this procedure:

- ESH-17-024, "Personnel Training"
- ESH-17-OP, "Quality Assurance Project Plan for the Operating Permit Project"
- LIR404-10-01, "Air Quality Reviews"
- ESH-17-103, "Review of New or Modified Radioactive Air Emission Sources"
- DOE Order 5400.1, "General Environmental Protection Program"
- DOE Order 5400.5, "Radiation Protection of the Public and the Environment"

Note

Actions specified within this procedure, unless preceded with "should" or "may," are to be considered mandatory guidance (i.e., "shall").

Review new and modified projects

Overview

Integrated Safety Management (ISM) requires that managers and supervisors identify and mitigate hazards associated with new activities and projects at the Laboratory, and that the work be authorized before any new activities begin. Line managers and supervisors or their designee can ensure that a review of air quality requirements is integrated into the ISM hazard control system with one or more of the following actions:

- Perform an air quality review using criteria in the Air Quality Review LIR404-10-01.1
- Contact ESH-17 for an air quality review
- Contact ESH-3 to initiate an ESH-ID

ESH-17's objective is to review all new and changed Laboratory activities and projects to ensure that Clean Air Act requirements are met before the activity or project begins. In addition, ESH-17 uses this review to identify new and or modified sources of air emissions or direct penetrating radiation, to ensure compliance with DOE Orders 5400.1 and 5400.5.

Identify air quality issues

The **air quality reviewer,** using the guidance developed in the "Quality Assurance Project Plan for the Operating Permit Project" (QAPP), reviews the project information that is provided in the project summary/profile or that is collected by contacting the responsible personnel. At a minimum, it is necessary to know the types of chemicals and the associated quantities, pieces of equipment, processes, and process rates and capacities that are involved.

The **air quality reviewer** performs an applicability evaluation of the following:

- 20 NMAC 2.72 – Construction Permits
- 20 NMAC 2.70 – Operating Permits and 20 NMAC-2.73 – Notice of Intent and Emissions Inventory Requirements
- 40 CFR 61 Subpart H – Radionuclide National Emission Standard for Hazardous Air Pollutants (Rad-NESHAP)
- 20 NMAC 2.60 Open Burning
- 40 CFR 61 Subpart C - Beryllium NESHAP
- 40 CFR 61 Subpart M - Asbestos NESHAP
- Regulated chemicals and associated requirements
- Additional Clean Air Act (CAA) requirements
- Identification of sources of direct penetrating radiation

Each of the applicability evaluations is described in the following sections.

Review new and modified projects, continued

Identify 20 NMAC 2.72 issues	The **air quality reviewer** identifies the applicable source specific requirements in 20 NMAC 2.72. These requirements may include permitting or exemption notification to NMED. To determine the requirements under 20 NMAC 2.72, the air quality reviewer performs the actions described in the flow chart in Attachment 1.
Identify 20 NMAC 2.70 and 2.73 issues	The **air quality reviewer** identifies necessary revisions to the Title V Operating Permit Application regarding new or changed process, activity, or equipment. The air quality reviewer also determines and documents when a new or changed process, activity, or equipment qualifies as a Title V Operating Permit Insignificant or Trivial Activity. The air quality reviewer also assesses whether the source needs to be added or removed from the annual emissions inventory according to 20 NMAC 2.73.
Identify Rad-NESHAP issues	Refer to procedure ESH-17-103.
Identify Open Burning issues	The **air quality reviewer** identifies planned open burning activities, identifies if an applicable permit exists, or if a new permit is potentially needed.
Identify Beryllium NESHAP issues	The **air quality reviewer** identifies planned beryllium machining activities, identifies if an applicable permit exists, or if a new permit is potentially needed.
Identify Asbestos NESHAP issues	The **air quality reviewer** identifies any potential asbestos disturbances, asbestos containing material disturbances, building renovations, electrical upgrades, or demolition activities. The air quality reviewer also identifies the potential need for reporting and informs ESH-17 personnel responsible for the asbestos reporting.

Review new and modified projects, continued

Identify regulated chemicals

The **air quality reviewer** evaluates the chemicals involved to identify applicable regulatory requirements. Requirements may be applicable to chemicals regulated as volatile organics compounds (VOCs), hazardous air pollutants (HAPs), toxic air pollutants (TAPs) regulated under 20 NMAC 2.72, toxics and flammables listed under Section 112(r) of the Clean Air Act, and toxic chemicals included in the Emergency Planning and Community Right-to-Know Act (EPCRA). Additional requirements may also be applicable for some chemicals used.

Identify additional CAA issues

The **air quality reviewer** is responsible for the identification of additional Clean Air Act requirements. Some commonly applicable requirements include, but are not limited to, the following:

- Ozone Depleting Substance phase out, service, disposal, and inventory requirements (Title VI of the Clean Air Act)
- New Source Performance Standards for Volatile Organic Liquid Storage Vessels (40 CFR 60 Subpart Kb)
- Opacity limits (20 NMAC 2.61 – Control of Smoke and Visible Emissions)
- Reporting and emissions tracking for degreasers (40 CFR 63 Subpart T)

Refer to the statutory requirements that have been summarized in the 20 NMAC 2.70 Operating Permit Application for the Laboratory and the QAPP. Using the statutory requirements listed in the application, identify all requirements potentially applicable to the project. In addition, consider all new state and federal requirements that may be applicable and not yet documented in the application or the QAPP.

Identify new or modified sources of direct penetrating radiation

The **air quality reviewer** identifies new and/or modified sources of direct penetrating radiation by performing a search for “neutron” or “gamma” in the project profile. If these terms are found, the air quality reviewer provides the project information to the Direct Penetrating Radiation (DPRNET) project leader. The new or modified source is reviewed by the DPRNET project leader for:

- Monitoring requirements specified in DOE Order 5400.1
- Compliance with the DOE Order 5400.5 100 mrem public dose limit
- public dose ALARA considerations.

Documenting the response

Write air quality review

The **air quality reviewer** prepares a written air quality review (AQR) that consists of a summary of the new or modified project, the results or assessment of the air quality requirements, any outstanding or unresolved issues, and key words or database fields that will facilitate the ability to query the AQR records. The review should clearly communicate the regulatory requirements, actions that must be taken to ensure and maintain compliance, and the assistance that is available from ESH-17.

Resolve air quality issues

The **air quality reviewer** informs the Project Leader and other subject matter experts of the air quality issues as they are identified. The **Project Leader** delegates the air quality issue to qualified project personnel or subject matter experts for resolution as described in the QAPP. The following tasks may be delegated:

- prepare permit applications
- prepare notifications
- complete permit revisions
- develop compliance programs
- ensure compliance with existing permit conditions
- update the emissions inventory
- maintain regulatory compliance

Attach database parameters

The **air quality reviewer** determines and checks/populates applicable database fields.

Checkboxes for the following fields are in the AQR tracking database, with the exception of the Title V field which is a drop down list. If the project meets the following definitions, check the appropriate boxes, or, from the pull down list, select an item if the project meets the conditions specified in the table below.

Field	Check database box if:
Active	Additional information is required for the project/process/or pieces of equipment in order to complete an air quality compliance assessment, or the project requires a notification/permit.
Monitoring Alterations	The project involves/affects or potentially involves/affects monitored rad stacks, or compliance monitoring activities.

Documenting the response, continued

Field	Check database box if:
Rad Concerns	The project involves rad materials (including sealed sources), rad contamination, or has the potential to involve rad materials/contamination.
Asbestos Concerns	The project involves potential asbestos or asbestos containing material, building renovation, or demolition activities.
Chemical	The project involves or uses regulated chemicals or has the potential to use regulated chemicals. Regulated chemicals include, but are not limited to, the following: • Volatile Organic Compounds (VOCs) • Hazardous Air Pollutants (HAPs) • Toxic Air Pollutants (TAPs) • 112(r) Chemicals including toxics and flammables • Emergency Planning and Community Right-to-Know Act (EPCRA) Chemicals • Halogenated Solvents
Fugitive Emissions	The project emits fugitive emissions outside, including ground disturbances.
Inside	The project emits fugitive/diffuse emissions inside a structure or building.
Title V	The project causes changes or requires updates to the Title V Operating Permit Application. • Generators – Any generator • Boilers – Any boiler • Tanks – Any storage tank • Degreasers – Any degreaser • Other – Special sources that need to be evaluated separately. Examples include, but are not limited to, Rock Crusher, Asphalt Plant, and Wood Chipper.
Pt 1 mrem/yr Exemption	The project meets the 0.1 mrem/yr exemption or qualifies for new construction and requires reporting to EPA.

Obtain technical review

The **air quality reviewer** requests a technical review of the AQR and any applicable calculations from the Project Leader and other subject matter experts.

The **technical reviewer** checks for technical accuracy and completeness of the AQR and the calculations, makes or requests necessary changes, and resolves comments with the air quality reviewer.

Documenting the response, continued

Submit air quality review

The **air quality reviewer** sends the air quality review to the personnel that requested the review and/ or submits it through the ESH-ID system.

The **air quality reviewer** also sends a copy to ESH-17 administrative personnel.

Populate records

ESH-17 administrative personnel assign a tracking number, file the AQR in the records room, and enter the AQR in the informal tracking database maintained by ESH-17.

Review records

Periodically, the **air quality reviewer** and/or **ESH-17 administrative personnel** review the records (electronic and hard copy) for completeness, typing and spelling errors, and for accuracy.

Generate summary reports

Upon the request of appropriate project leaders, the **air quality reviewer** and **administrative personnel** should generate periodic summary reports of any requested AQRs. Summary reports have been requested for Rad-NESHAP, asbestos, environmental surveillance, refrigerants, and neutron and gamma sources.

Records resulting from this procedure

Records

The following records generated as a result of this procedure must be submitted **at the time of completion** as records to the records coordinator:

- final AQR
- documentation of the technical review
- calculations and modeling results
- background documentation and/or correspondence generated or requested

Click here to record “self-study” training to this procedure.

FLOW CHART OF NSR PROCESS